UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/698,429 | 10/26/2000 | Stephen T. Gase | 10004438-1 | 5879 |

7590          06/04/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO  80527-2400

| EXAMINER |
|---|
| REITZ, KARL |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2624 | |

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _26 October 2000_.

2a)☐ This action is **FINAL.**          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 October 2000_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

# DETAILED ACTION

## *Drawings*

1.      The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference sign(s) not mentioned in the description:

15 (figure 1) and 114 (figure 4). A proposed drawing correction, corrected drawings, or

amendment to the specification to add the reference sign(s) in the description, are

required in reply to the Office action to avoid abandonment of the application. The

objection to the drawings will not be held in abeyance.

## *Claim Objections*

2.      Claims 1 and 11 are objected to because of the following informalities:  the word

"coping" on line 4 page 12 and line 7 page 7 should be replaced with the word

"copying".  Appropriate correction is required.

## *Claim Rejections - 35 USC § 102*

3.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.      Claims 1-3, 6-10, 16, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being

anticipated by Samuels (5,937,225).

5.      In accordance with claim 1, Samuels discloses a method of calculating the

amount of marking material required to print a print job (col. 1 lines 6-8 and col. 3 lines

55-59).

6.      Samuels further discloses transmitting the job to a print server (col. 5 lines 15-17).

7.      Samuels further discloses copying the print job; in Samuels' system, the received job is formatting, by formatting entity 31, and sent to the print spooler 35 for printing (col. 3 lines 35-37, at the same time, the job is also fed to an entity 32, which counts the pixels to calculate toner usage (col. 3 lines 38-41).

8.      Samuels further discloses processing the print job including at least selecting an image-forming device for the print job and transmitting the job to the device; in Samuels' system, the first task, performed by the formatting entity 31, involves sending the job to the print spooler 35 for printing (col. 3 lines 35-37).

9.      Samuels further discloses a separate task utilizing the copy of the print job, calculating the amount of marking material required to print the job; in Samuels' system, the entity 32 counts the pixels to determine toner usage (col. 3 lines 38-41).

10.     In accordance with claim 16, Samuels discloses a computer network 43 (figure 3) and a print server (unnumbered, discussed on col. 5 lines 15-17).

11.     Samuels further discloses copying means for copying a received print job; in Samuels' system, the received job is formatting, by formatting entity 31, and sent to the print spooler 35 for printing (col. 3 lines 35-37, at the same time, the job is also fed to an entity 32, which counts the pixels to calculate toner usage (col. 3 lines 38-41), thus formatting entity copies the job by concurrently sending it to two separate modules.

12.     Samuels further discloses a calculation module, entity 32, which uses the copied print job to calculate the amount of marking material required to print the print job; in

Samuels' system, the entity 32 counts the pixels to determine toner usage (col. 3 lines 38-41).

13.    Samuels further discloses processing circuitry for processing the print job and transmitting the processed print job to a desired imaging device; in Samuels' system, the formatting entity 31 formats the job and sends the job to the print spooler 35 for printing (col. 3 lines 35-37).

14.    In accordance with claims 2 and 17, Samuels discloses that the job is initially transmitted in either a printer-specific format or in a format that will be converted to printer-specific format by the printer (i.e. universal format) (col. 2 lines 41-44). As mentioned above, Samuels discloses transmitting the job to a print server (col. 5 lines 15-17) instead of directly to a printer.

15.    In accordance with claims 3 and 6, Samuels discloses converting the copy of the universal file format file to raster data; in Samuels' system, formatting entity 31 generates a printer-specific stream of bits, raster data, that is sent to the print spooler 35 for printing (col. 3 lines 35-37).

16.    Samuels further discloses counting the number of image elements (pixels) contained in the print job, which is performed by the entity 32 (col. 3 lines 38-41).

17.    Samuels further discloses calculating the amount of marking material required to print the print job using a known amount of marking material for printing an individual image element; in Samuels' system the pixel count obtained by entity 32 is used to determine the amount of toner used for each job based on the fact that the amount of

toner used for each pixel is known or estimated by a weighting factor (col. 3 lines 40-

59).

18.    In accordance with claims 7 and 8, Samuels discloses performing the first and

second tasks in parallel (col. 3 lines 35-41) and that the server performs the processes

(col. 5 lines 15-17), thus performing the second task in the background while the first

task is also being implemented.

19.    In accordance with claims 9 and 19, Samuels discloses that the marking material

comprises toner for a laser jet printer (col. 2 lines 25-26).

20.    In accordance with claims 10 and 20, Samuels discloses that the marking

material comprises ink for an ink-jet printer (col. 2 lines 31-33).

### *Claim Rejections - 35 USC § 103*

21.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

22.    Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Samuels.

23.    In accordance with claim 4, Samuels discloses that the job is initially transmitted

in either a printer-specific format or in a format that will be converted to printer-specific

format by the printer (i.e. universal format) (col. 2 lines 41-44).

24.    Samuels does not disclose expressly that the universal format is PDF.

25.    At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to use PDF as the universal file format as a matter of design

choice, since applicant has not disclosed that the use of PDF as the universal file format

solves any stated problem or is for any particular purpose, and it appears that the

invention would perform equally well with the use of another popular universal file

format.

26.     Claims 5, 11-15 and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Samuels in view of Ferguson (5,825,986).

27.     In accordance with claims 5 and 18, Samuels discloses that job is formatted into

a printer-specific format by the formatting entity 31, but Samuels does not disclose

expressly that the job is formatted into a PDL.

28.     Ferguson discloses formatting the job into a PDL (col. 3 line 66 – col. 4 line 3).

29.     Samuels Ferguson and are combinable because they are from the same field of

endeavor, namely count image elements to determine toner usage.

30.     Therefore, at the time of invention, it would have been obvious to a person of

ordinary skill in the art, to format the job into a PDL, as disclosed by Ferguson.

31.     The motivation for doing so would have been to describe the output to the printer,

which then uses the instructions from the PDL to construct the graphics necessary to

create the image (Ferguson: col. 3 line 66 – col. 4 line 3).

32.     In accordance with claim 11, Samuels discloses a computer network 43 (figure 3)

including a host computer 40 and print server (unnumbered, discussed on col. 5 lines

15-17) an at least one image-forming device 45 which uses a marking material for

printing, and a method of calculating the amount of marking material required to print a

print job (col. 1 lines 6-8).

33.    Samuels discloses that the job is initially transmitted in either a printer-specific

format or in a format that will be converted to printer-specific format by the printer (i.e.

universal format) (col. 2 lines 41-44).

34.    Samuels further discloses transmitting the job to a print server (col. 5 lines 15-

17).

35.    Samuels further discloses copying the print job; in Samuels' system, the received

job is formatting, by formatting entity 31, and sent to the print spooler 35 for printing (col.

3 lines 35-37, at the same time, the job is also fed to an entity 32, which counts the

pixels to calculate toner usage (col. 3 lines 38-41).

36.    Samuels further discloses converting the copy of the universal file format file to

raster data; in Samuels' system; formatting entity 31 generates a printer-specific stream

of bits, raster data, that is sent to the print spooler 35 for printing (col. 3 lines 35-37).

37.    Samuels further discloses processing the print job including at least selecting an

image-forming device for the print job and transmitting the job to the device; in Samuels'

system, the first task, performed by the formatting entity 31, involves sending the job to

the print spooler 35 for printing (col. 3 lines 35-37).

38.    Samuels further discloses a separate task utilizing the copy of the print job,

calculating the amount of marking material required to print the job, in which Samuels

discloses a step of converting the copy of the universal file format file to raster data; in

Samuels' system; formatting entity 31 generates a printer-specific stream of bits, raster

data, that is sent to the print spooler 35 for printing (col. 3 lines 35-37).

39.    Samuels further discloses counting the number of image elements (pixels) contained in the print job, which is performed by the entity 32 (col. 3 lines 38-41).

40.    Samuels further discloses calculating the amount of marking material required to print the print job using a known amount of marking material for printing an individual image element; in Samuels' system the pixel count obtained by entity 32 is used to determine the amount of toner used for each job based on the fact that the amount of toner used for each pixel is known or estimated by a weighting factor (col. 3 lines 40-59).

41.    Samuels discloses that job is formatted into a printer-specific format by the formatting entity 31, but Samuels does not disclose expressly that the job is formatted into a PDL.

42.    Ferguson discloses formatting the job into a PDL (col. 3 line 66 – col. 4 line 3).

43.    In accordance with claims 12 and 13, Samuels discloses performing the first and second tasks in parallel (col. 3 lines 35-41) and that the server performs the processes (col. 5 lines 15-17), thus performing the second task in the background while the first task is also being implemented.

44.    In accordance with claim 14, Samuels discloses that the marking material comprises toner for a laser jet printer (col. 2 lines 25-26).

45.    In accordance with claim 15, Samuels discloses that the marking material comprises ink for an ink-jet printer (col. 2 lines 31-33).
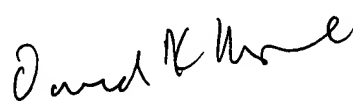
## *Conclusion*

46.     The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Brown (5,970,275), Motamed (6,356,359) and Garr (5,802,420)

disclose other methods and apparatuses for estimating marking material usage in

parallel with print processing.  Barry (2004/0070788) discloses monitoring marking

material levels in network print setting with multiple printers.  Hayakawa discloses using

universal file formats, including PDF.

47.     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Karl R. Reitz whose telephone number is (703) 305-

8696.  The examiner can normally be reached on Monday-Friday 8:00-4:30.

48.     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David K. Moore can be reached on (703) 305-7452.  The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

49.     Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

KRR

DAVID MOORE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600